

# Telecom Churn & Revenue Risk Analysis

**Project Title:** Telecom Churn & Revenue Risk Analysis

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## 1. Executive Summary

Telecom Corp faces recurring revenue loss due to customer churn, particularly among short-tenure and flexible contract customers. This project analyzes customer behavior to identify high-risk churn segments, quantify revenue at risk, and recommend targeted retention strategies that maximize ROI while improving customer satisfaction.

Using Python for data cleaning, feature engineering, and churn analysis, and Power BI for executive dashboards, the analysis identified a 27% churn rate, exposing approximately ₹71K in revenue at risk. Churn is primarily driven by month-to-month contracts, fiber optic customers without support, and electronic check payment methods.

Three executive dashboards were developed to evaluate churn exposure, identify churn drivers, and prioritize retention actions. The recommended strategies are expected to reduce churn by 10–15%, protect high-value revenue, and improve long-term customer retention.

## 2. Business Problem

Customer churn directly impacts recurring revenue and customer lifetime value in the telecom industry. Without a clear understanding of who is churning and why, retention efforts become inefficient and costly.

### Key Business Questions

- Which customer segments are most likely to churn?
- What services, contracts, and payment methods drive churn?
- How much revenue is at risk if churn is not addressed?
- Which retention strategies deliver the highest ROI?

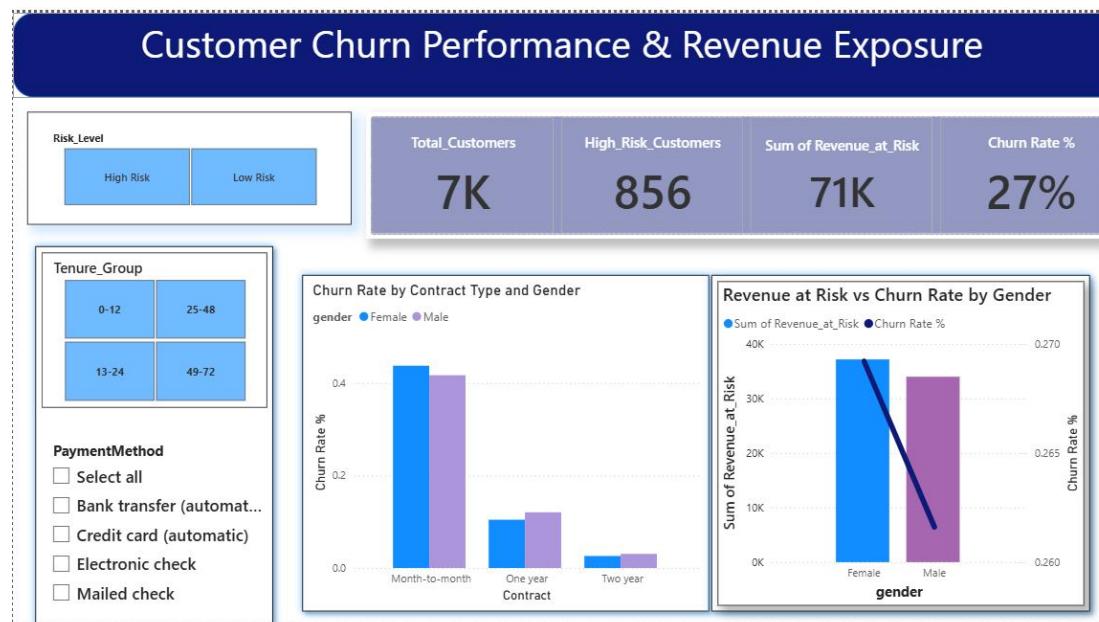
### Data & Methodology

**Python:** Data cleaning, feature engineering, churn segmentation, revenue-at-risk calculation

**Power BI:** Executive dashboards for churn exposure, drivers, and action prioritization

## Dashboard 1 — Customer Churn Performance & Revenue Exposure

**Purpose:** Executive overview of churn severity and revenue impact



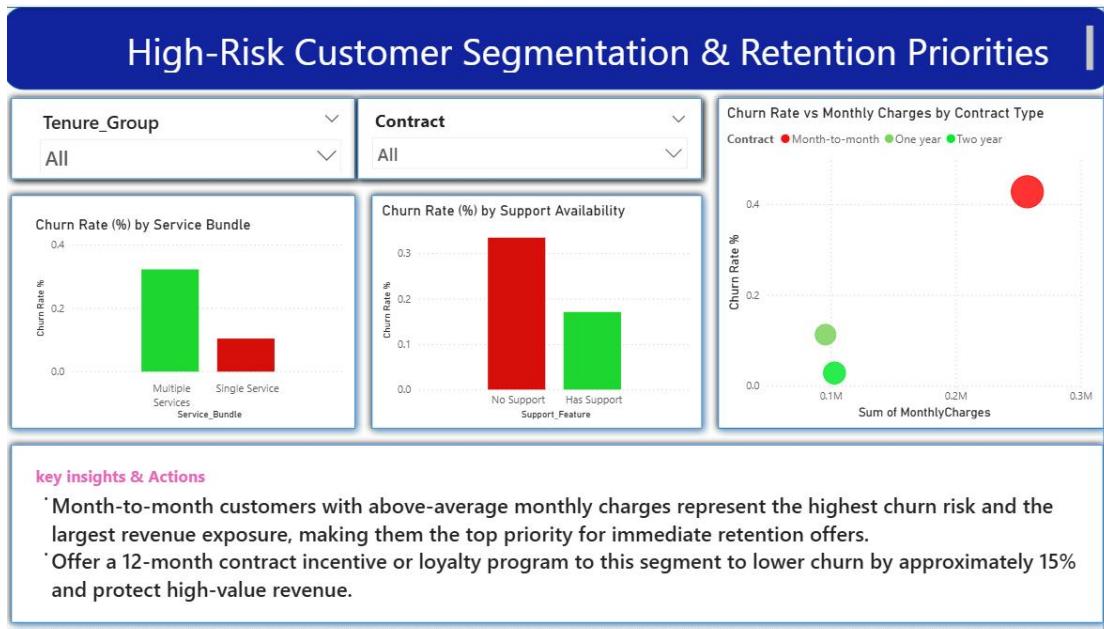
## Dashboard 2 — Churn Drivers & Behavioral Patterns

**Purpose:** Identify why customers churn



## Dashboard 3 — High-Risk Customer Segmentation & Retention Priorities

**Purpose:** Decide where to act first



## Key Insights & Recommendations

- ₹71K (27%) revenue at risk, driven mainly by month-to-month contracts  
Action: Prioritize contract migration campaigns
- Month-to-month customers churn ~3× more than long-term contracts  
Action: Offer 12-month contract incentives to high-risk users
- Fiber optic + no support customers churn the most  
Action: Bundle proactive support for fiber customers
- Electronic check users show highest churn  
Action: Incentivize auto-pay methods (card/bank transfer)
- High-charge, short-tenure customers deliver highest ROI retention  
Action: Target this segment to reduce churn by ~15%

## Conclusion

This analysis shows that customer churn is predictable and preventable when viewed through a revenue and behavior lens. A significant portion of churn is driven by month-to-month contracts, lack of support for fiber optic customers, and high-risk payment behaviors, resulting in measurable revenue exposure.

By focusing retention efforts on high-value, short-tenure customers and implementing targeted contract migration, support bundling, and payment optimization strategies, TelecomCorp can reduce churn by an estimated 10–15% while protecting recurring revenue.

Shifting decision-making from customer counts to revenue-at-risk and retention ROI will enable more effective churn management and support sustainable, long-term growth.

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